AUTHOR INDEX

Alpert, J.S., 261
Ananthasubramaniam, K., 247

Bakir, S., 23
Batchvarov, V., 325
Bates, S.M., 235
Bongaerts, A.H.H., 139
Buchan, A.M., 185

Chrysant, G.S., 23
Colombo, A., 91

Davey, P., 359
de Bruin, H.G., 149, 157
de Feyter, P.J., 139, 149, 157

Franz, M.R., 311

Gillis, A.M., 385
Goes, E.S., 167
Goldschlager, N., 273
Golub, M.S., 39
Grijseels, E.W.M., 167

Helguera, M.E., 75
Hirsh, J., 235
Hohnloser, S.H., 351
Hulshoff, M., 149, 157

Indik, J.H., 261

Lyden, P.D., 175

Malik, M., 325
Michaels, A.D., 273
Mikhail, N., 39
Mody, A., 217
Morley, P., 185

Napolitano, C., 345

Oparil, S., 23
Oudkerk, M., 139, 149, 157

Patel, S.C., 217
Pinski, S.L., 75

Prasad, A., 247
Priori, S.G., 345

Rao, P.S., 59
Rensing, B.J., 139, 149, 157
Resnick, L., 1
Rosenberg, G.A., 209

Schwartz, P.J., 345
Shurafa, M., 247
Small, D.L., 185

Tobis, J.M., 91
Tuck, M.L., 39

van Geuns, R.-J., M., 139, 149, 157
van Hout, B.A., 167
van Ooijen, P.M.A., 139, 149, 157
van Ufford, M.A.Q., 167

Wielopolski, P.A., 149, 157

Yamashita, T., 91

Zabel, M., 311

SUBJECT INDEX

Abxicimab
  in heparin-induced thrombocytopenia, 252, 254
  in myocardial infarction, 241
Adenosine phosphate inhibitors, in heparin-induced thrombocytopenia, 254
Adenosine receptors, in ischemic stroke pathophysiology, 191-192
Adhesion molecules
  in brain edema pathophysiology, 210
  in ischemic stroke pathophysiology, 196-197
Adjunctive Balloon Angioplasty following Coronary Atherectomy Study, 103
Adrenal hemorrhage, in heparin-induced thrombocytopenia, 248
Afterdepolarizations, early, in QT dispersion, 316-317
Age
  hypertension-obesity associations with, 42
  in myocardial infarction risk stratification, 274
Alpha-adrenergic blockers, in hypertension, in obesity, 53
α-Amino-3-hydroxy-5-methyl-4-isoxazole propionate receptors, in ischemic stroke pathophysiology, 190, 193
Amiodarone
  in atrial fibrillation, initiation of, 79-80, 85-86
Amiodarone (*continued*)
  QT interval dispersion due to
    in coronary artery disease, 388-389
    proarrhythmias and, 389-391
AMPA (α-amino-3-hydroxy-5-methyl-4-isoxazole propionate) receptors, in ischemic stroke pathophysiology, 190, 193
Ancrod, in heparin-induced thrombocytopenia, 251
Aneurysms, left ventricular, after myocardial infarction, reperfusion effects on, 443-445
Angina
  QT dispersion in, 354-356, 370
  stable
    QT dispersion in, 354-355, 370
    QT interval prolongation in, 362
  unstable
    low-molecular-weight heparin in, 238-241
    QT dispersion in, 354, 370
    QT interval prolongation in, 362-363
  vasospastic, QT dispersion in, 355-356
Angiography
  cerebral, in stroke, 179
  coronary. *See* Coronary angiography
Angiography Versus IVUS-Directed Stent Placement Trial, 106

Angioplasty
balloon, in aortic coarctation
native, 67-69
recurrent, 70-72
coronary. *See* Coronary angioplasty
Angiotensin II, toxicity of, 35
Angiotensin II receptor blockers, in hypertension dietary salt and, 35
in obesity, 53
Angiotensin-converting enzyme inhibitors
in heart failure, economic evaluation of, 169-170
in hypertension
dietary salt and, 35
in obesity, 53
QT interval dispersion due to, 389
Anisoylated plasminogen-streptokinase activator complex, 219
in myocardial infarction, 227-228
Antiarrhythmic drugs
in atrial fibrillation. *See* Atrial fibrillation, antiarrhythmic drug initiation in
QT interval dispersion due to, 385-391
in coronary artery disease, 387-389
vs. drug class, 392
vs. efficacy, 386-389
in hypertrophic cardiomyopathy, 389
in long QT syndrome, 386-387
modulators of, 392-393
in myocardial infarction, 389
prevention of, 393
in torsade de pointes, 389-393
ventricular proarrhythmia and, 389-393
Antibody (ies), heparin-dependent, 248
Anticoagulants, heparin as. *See* Heparin
Anticoagulants in the Secondary Prevention of Events in Coronary Thrombosis, 170
Antioxidants, overwhelmed, in ischemic stroke pathophysiology, 197
Antiphospholipid antibody syndrome, heparin-induced thrombocytopenia and, 252
Aortic coarctation, balloon dilatation of, long-term results of
native, 67-69
recurrent, 70-72
Aortic stenosis, balloon dilatation of, long-term results of, 63-67
Aorto-ostial lesions, stenting of, imaging with, 108-109
Apoptosis, of neurons, in ischemic stroke, 186-187
APRICOT trial, of reperfusion, after myocardial infarction, 479
Aprotinin, in cerebral hemorrhage, in thrombolytic therapy, 231
Argatroban, in heparin-induced thrombocytopenia, 251, 253, 255
Arrhythmias. *See also* QT dispersion; *specific arrhythmias*
after myocardial infarction, reperfusion effects on, 431-434, 439, 454
in vasospastic angina, 355-356
ventricular, in exercise testing, in myocardial infarction risk assessment, 283
Aspirin, in myocardial infarction, 238, 407
Asserachrom assay, for D-dimer, in pulmonary embolism, 263
Atenolol, in hypertension, in obesity, 52
Atherectomy
directional
imaging in, 101-103
stenting with, 116-117
rotational, stenting with, 117-118
Atherosclerosis, coronary, intravascular ultrasonography of. *See* Intravascular ultrasonography
ATP, depletion of, in ischemic stroke, 186, 194
ATPase, in blood pressure regulation, 2-3
Atrial fibrillation
antiarrhythmic drug initiation in, 75-90
dose dependence in, 80
drug interactions in, 80-81
in electrolyte abnormalities, 79
financial considerations in, 76-77
gender differences in, 77-78
heart rate and, 78-79
inpatient vs. outpatient, 84-85
proarrhythmia due to, 75-76
detection of, 81-84
incidence of, 76
predisposing factors in, 77-81
types of, 75-76
QT interval and, 78
in structural heart disease, 78
in myocardial infarction risk stratification, 277
Atrial natriuretic peptide, in sodium retention, in obesity hypertension, 47
Atrioventricular block, in myocardial infarction risk stratification, 276-277
Australian Streptokinase Trial, in stroke, 178
Autonomic nervous system, assessment of
in myocardial infarction risk stratification, 289-291
in reperfusion evaluation, 434-435, 445, 448-449
Autonomic Tone and Reflexes After Myocardial Infarction (ATRAMI) study, 435

Balloon angioplasty, coronary, imaging in, 97-101
Balloon dilatation, long-term results of, 59-74
in aortic coarctation, 67-69
in aortic stenosis, 63-67
in postoperative aortic recoarctation, 70-72
in pulmonic stenosis, 59-63
Baroreflex sensitivity
after myocardial infarction, 435

Baroreflex sensitivity (*continued*)
in myocardial infarction risk stratification, 290
in reperfusion evaluation, 449
Beta-blockers
in hypertension, in obesity, 52
after myocardial infarction, 434
QT interval dispersion due to, in long QT syndrome, 386
Black blood (spin-echo) imaging, of coronary arteries, 160-163
Blood flow, in myocardial ischemia, 458-460
Blood pressure
abnormalities of, in myocardial infarction risk assessment, 282-283
decreased, in weight loss, 51-52
increased. *See* Hypertension
management of, in thrombolytic therapy, 181
regulation of, intracellular divalent ions in, 2-6
Blood-brain barrier, edema and, 211-212
Body mass index, in obesity, 39-40
Body surface potential mapping, of QT dispersion, 312-313
early afterdepolarizations in, 316-317
vs. electrocardiography, 317-318
mechanistic basis of, 318
novel T-wave loop variables in, 318-319
rate dependence in, 319-320
T-peak-to-T-end hypothesis, 318
transmural dispersion of repolarization in, 318
T-wave genesis and, 313-314
upright T wave in, 314-315
vs. ventricular depolarization, 315-316
Bone loss, heparin-induced, 237
Brain, hemorrhage of, in thrombolytic therapy. *See* Thrombolytic therapy, cerebral hemorrhage in
Brain edema, ischemic, 209-216
blood-brain barrier and, 211-212
intracranial pressure in, 211
molecular events in, 209-211
neurodiagnosis of, 209, 213
pathophysiology of, 209-212
permanent, animal studies of, 212
reperfusion injury in, 211-214
treatment of, 214
vasogenic, 211-212
Brain-derived neurotrophic factor, in ischemic stroke pathophysiology, 197-198
Breath hold technique, in magnetic resonance imaging, of coronary arteries, 163
Bright blood (gradient-echo) imaging, of coronary arteries, 160-163

Calcification, of coronary arteries, imaging of, 94-97
Calcium
in blood pressure regulation, 2-6
dietary, in hypertension in, 12-13
Calcium (*continued*)
imbalance of
brain edema in, 210
in ischemic stroke, 186-187, 192-198
regulation of, 6-16
calcium intake in, 12-13
calcium-regulating hormones in, 10-13
dietary factors in, 10-13
extracellular, 10
glucose in, 13-14
insulin in, 14-15
lipids in, 16
mechanisms of, 7-8
renin system and, 9-10
salt in, 10-12
theoretical aspects of, 6-9
weight loss and, 16-17
Calcium channel blockers, in hypertension, in obesity, 53-54
Calcium channels, activation of, in ischemic stroke, 188-189
Calcium-induced calcium release, 8
Calcium-inhibitable calcium entry, 8
Calpains, in ischemic stroke pathophysiology, 195
Can Routine Ultrasound Improve Stent Expansion Trial, 106
Canadian Coronary Atherectomy Trial, 102
Captopril, in myocardial infarction, 408, 422
Cardiac arrhythmias. *See* Arrhythmias
Cardiac catheterization
heparin-induced thrombocytopenia in, 253-254
in myocardial infarction risk assessment, 279-280
Cardiac output
decreased, in weight loss, 50
in obesity hypertension, 48-49
Cardiomyopathy, hypertrophic, antiarrhythmic drugs in, efficacy of, 389
Cardiopulmonary bypass, heparin-induced thrombocytopenia in, 254-255
Casein kinase, in ischemic stroke pathophysiology, 195
Caspases, in ischemic stroke pathophysiology, 195
Catecholamines
in hypertension, 16
in obesity hypertension, 44-45, 47
Catheterization, cardiac
heparin-induced thrombocytopenia in, 253-254
in myocardial infarction risk assessment, 279-280
C7E3 Fab Antiplatelet Therapy in Unstable Refractory Angina trial, 241
Cerebrovascular disease
cell death in. *See* Ischemic stroke, pathophysiology of edema in. *See* Brain edema
thrombolytic therapy for. *See* Thrombolytic therapy, for stroke
Chlormethiazole, in ischemic stroke, 191
2-Chloroadenosine, in ischemic stroke, 192

Chlorthalidone, in hypertension, in obesity, 52
Cholesterol, metabolism of, hypertension and, 16
Cholesterol and Recurrent Events study, data from, in economic evaluation, 170
Clonidine, in hypertension, in obesity, 53
Clopidogrel, in heparin-induced thrombocytopenia, 254
CLOUT Pilot Trial, of coronary artery stenting, 120
Coagulation disorders
  heparin-induced. *See* Heparin, thrombocytopenia and thrombosis due to
  thrombolytic therapy for. *See* Thrombolytic therapy
Collagen, remodeling of, after late reperfusion, 424-426
Collateral circulation, reperfusion effects on, 429
Community Hypertension Evaluation Clinic screening, for obesity prevalence, 41
Computed tomography
  of brain edema, 213
  of cerebral hemorrhage, in thrombolytic therapy, 230-231
  electron beam, coronary angiography with. *See* Coronary angiography, electron beam computed tomography with
  of pulmonary embolism, 265-268
  of stroke, 179
Congenital disorders
  aortic coarctation, balloon dilatation of
    native, 67-69
    recurrent, 70-72
  valvular disease, balloon dilatation in, long-term results of
    aortic stenosis, 63-67
    pulmonic stenosis, 59-63
Conotoxins, in ischemic stroke, 189
Contraction band necrosis, myocardial, reperfusion effects on, 429-430
Contrast, in magnetic resonance imaging, 155
Coronary angiography
  electron beam computed tomography with, 139-148
    accuracy of, 145
    of bypass grafts, 145-146
    image processing in, 140-141
    methodology for, 139-144
    of native coronary arteries, 144-145
    rendering techniques in, 141-144
    scanning in, 139-140
    technical improvements needed in, 146-147
  vs. intravascular ultrasonography. *See* Intravascular ultrasonography
  in myocardial infarction risk assessment, 279-280
  ventricular remodeling after, 480-481
Coronary angioplasty
  heparin-induced thrombocytopenia in, 253-254
  imaging in, 97-101
  low-molecular-weight heparin after, 242
Coronary angioplasty (*continued*)
  QT dispersion effects of, 355
  results of, 401, 411-415
  signal-averaged electrocardiography after, 447-448
  vs. stenting, 414-415
Coronary Angioplasty vs. Excisional Atherectomy Trial, 101-103
Coronary artery (ies)
  anomalies of, magnetic resonance imaging of, 164
  bifurcations of, stenosis of, stenting of, 110-113
  bypass surgery for. *See* Coronary artery bypass graft surgery
  collateral circulation in, reperfusion effects on, 429
  disease of. *See* Coronary artery disease
  dissection of, after angioplasty, imaging of, 99
  eccentric lesions of, imaging of, 94
  left main, stenting of, 112
  magnetic resonance imaging of. *See* Magnetic resonance imaging, of coronary arteries
  overlap of, imaging of, 93
  reperfusion of, after myocardial infarction. *See* Reperfusion, after myocardial infarction
  restenosis of
    after atherectomy, 103
    determinants of, 99, 101
    in-stent, treatment of, 123-127
    mechanisms of, 101
    pseudo--in-stent, 123, 125-126
    after stenting, 105-106, 115-117
  stenosis of
    in graft, 114-115
    intravascular ultrasonography of. *See* Intravascular ultrasonography
    magnetic resonance imaging in, 164-165
    recurrent, 105-106, 115-117
    residual, myocardial viability in, 458
  stenting of
    vs. angioplasty, 414-415
    imaging of. *See* Intravascular ultrasonography
Coronary artery bypass graft surgery
  arrhythmia protection in, 442-443, 448
  graft evaluation after
    coronary angiography with electron beam computed tomography in, 145-146
    magnetic resonance imaging in, 164
  graft stenosis in, stenting of, 114-115
  heparin-induced thrombocytopenia in, 254-255
Coronary artery disease. *See also* Angina; Myocardial infarction; Myocardial ischemia
  antiarrhythmic drugs in, efficacy of, 387-389
  intravascular ultrasonography of. *See* Intravascular ultrasonography
  QT interval abnormalities in. *See also* Myocardial ischemia, QT dispersion in
    mortality and, 359-384
    in antecedent syndromes, 369-370

Coronary artery disease (*continued*)
in apparently healthy persons, 361-362
dispersion, 360, 369-373
in effort-induced ischemia, 370
in exercise-induced ventricular arrhythmias, 376
future research in, 377-379
in heart failure, 372-373
heart rate adaptation and, 360-361, 373-376
in hyperlipidemia, 370
in ischemia, 362-368, 370-373, 375
in left ventricular hypertrophy, 369-370
in myocardial infarction, 363-368, 370-372, 375-376
in old age, 369
prolongation, 359-369
in stable angina, 362, 370
in structural heart disease, 375
twenty-four hour studies of, 368-369
in unstable angina, 362-363, 370
Coronary Artery Risk Development in Young Adults, obesity data from, 41
Coronary Artery Surgery Study (CASS), results of, 442
Corticosteroids, in myocardial infarction, infarct remodeling in, 427-428
Cost minimization analysis, in economic evaluation, 168
Cost-benefit analysis, in economic evaluation, 168-169
Cost-effectiveness analysis, in economic evaluation, 168
Costs. *See also* Economic evaluation
of thrombolytic therapy, for stroke, 178-179
Cost-utility analysis, in economic evaluation, 168
Coumadin, in coronary artery stenting, 105-106
C-reactive protein, in myocardial infarction risk stratification, 278
Creatine, in myocardial infarction risk stratification, 278
Creatine kinase, in myocardial infarction risk stratification, 277
Cryoprecipitate, in cerebral hemorrhage, in thrombolytic therapy, 231
Cyclin-dependent protein kinase 5, in ischemic stroke pathophysiology, 195
Cyclosporine, in ischemic stroke, 194
Cytokines
in brain edema pathophysiology, 210
in ischemic stroke pathophysiology, 196

Dalteparin, in myocardial infarction, 239-240, 242
Danaparoid, in heparin-induced thrombocytopenia, 251, 253, 254
neutralization of, 254
Danish Trial in Acute Myocardial infarction, results of, 412-413
Dantrolene, in ischemic stroke, 193
D-dimer assay, in pulmonary embolism, 262-264
Debulking, before stenting, 115-116
Deep venous thrombosis
detection of, 262
thrombolytic therapy for, cerebral hemorrhage in, 230
Diabetes mellitus
intracellular divalent ion status in, 3-6
in myocardial infarction risk stratification, 274-275
nephropathy in, obesity and, 48
obesity hypertension and, 43-44, 47
Diet, in hypertension control, 16-17
calcium in, 12-13, 16-17
salt in. *See* Salt, dietary, in hypertension
1,25-Dihydroxyvitamin D, in calcium regulation, hypertension and, 12-13
Dipyridamole, in stress testing, in myocardial infarction risk assessment, 284-285
Directional atherectomy
imaging in, 101-103
stenting with, 116-117
Dissection, coronary artery, after angioplasty, imaging of, 99
Diuretics
in brain edema, 214
in hypertension, in obesity, 52
Dobutamine echocardiography, in myocardial viability assessment, 463-464
Dofetilide, QT interval dispersion due to, proarrhythmias and, 392
Duteplase, in stroke, historical perspective of, 176-177

Echo signal, in magnetic resonance imaging, 153-155
Echocardiography
contrast, in myocardial viability assessment, 461-463
dobutamine, in myocardial viability assessment, 463-464
stress, in myocardial infarction risk assessment, 286-287
Echo-planar imaging, of coronary arteries, 162-163
Economic evaluation, in cardiology, 167-173
application of, 171
current practice in, 169-171
goal of, 168
indirect costs in, 168-169
local vs. international, 170
modeling in, 170-171
principles of, 168-169
subgroup analysis in, 171
Edema, brain. *See* Brain edema
Efficacy and Safety of Subcutaneous Enoxaparin in Non-Q-Wave Coronary Events trial, 239-240
Ejection fraction
in myocardial infarction risk stratification, 278
after reperfusion, in myocardial infarction, 406, 408-411

Elderly persons
hypertension-obesity associations in, 42
QT dispersion in, mortality and, 369
Electrocardiography
in antiarrhythmic drug initiation, 81-84
in arrhythmias, reperfusion effects on, 432-433
in long QT syndrome, 347-348
in myocardial infarction risk assessment. *See* Myocardial infarction, risk stratification after
in QT dispersion, 312
antiarrhythmic drug action and, 385-391
automatic vs. manual evaluation of, 333-338
in coronary artery disease, mortality and, 359-384
coronary ischemia effects on, 351-358
deficiencies in, 313
depolarization vs. repolarization in, 315-316
vs. electrophysiology, 317-318
heart rate corrections in, 319-320, 333
lead systems for, 331-333
mechanistic basis of, 318
vs. monophasic action potential measurement, 317-318
novel T-wave loop variables in, 318-319
at Q wave onset, 330-331
reliability of, 333-338
simultaneous recording in, 331
T wave morphology in, 328-329
T-peak-to-T-end hypothesis and, 318
U wave inclusion in, 330
upright T wave in, 314-315
QT interval in. *See* QT interval
signal-averaged, after reperfusion, 446-448
Electrolyte imbalance, brain edema in, 210-211
Electron beam computed tomography, coronary angiography with. *See* Coronary angiography, electron beam computed tomography with
Electrophysiologic studies
in myocardial infarction risk stratification, 291-292
in reperfusion evaluation, 449-450
Eliprodil, in ischemic stroke, 190
Embolism, pulmonary. *See* Pulmonary embolism
Endoplasmic reticulum, calcium dynamics in, in ischemic stroke, 193
Endothelial cell adhesion molecules, in ischemic stroke pathophysiology, 196-197
Endothelin, in myocardial infarction risk stratification, 277
Enoxaparin, in myocardial infarction, 239-240, 242
Enoxaparin and MaxEPA for the Prevention of Angioplasty Restenosis study, 242
Enoxaparin Restenosis After Angioplasty study, 242
Enzyme-linked immunosorbent assay
for D-dimer detection, in pulmonary embolism, 262-264
in heparin-induced thrombocytopenia, 250
Epsilon amino caproic acid, in cerebral hemorrhage, in thrombolytic therapy, 231
Eptifibatide, in myocardial infarction, 241
Estudio Multicentrico Estrepquinasa Republicas de America del sul Collaborative Group (EMERAS), results of, 400
European Cooperative Acute Stroke Study, of thrombolytic therapy, 176-177
European Cooperative Study Group, coronary artery reperfusion studies of, 399, 410
Evaluation of IIb/IIIa Platelet Receptor Antagonist 7E3 Preventing Ischemic Complications study, data from, in economic evaluation, 170
Excitation, in magnetic resonance imaging, 150
Excitotoxicity theory, of ischemic stroke, 186
Exercise, ventricular arrhythmias in, QT interval rate adaptation in, mortality and, 376
Exercise testing
in antiarrhythmic drug initiation, 84
in myocardial infarction risk assessment, 281-284
candidates for, 281-282
limitations of, 283-284
nuclear imaging in, 284-286
prognostic value of, 282-283
Extracellular matrix, remodeling of, after late reperfusion, 424-427

Fatty acids, metabolism of, hypertension and, 16
Fc receptors, genetic polymorphisms of, in heparin-induced thrombocytopenia, 248
Fibrinolysis, 218-219
Fibrinolytic therapy. *See* Thrombolytic therapy
Fibrinolytic Therapy Trial, results of, 398, 400, 405, 471
Fibroblast growth factor, in ischemic stroke pathophysiology, 197-198
Flecainide, in atrial fibrillation, initiation of, 80, 85
FOS protein, in ischemic stroke pathophysiology, 196
Fragmin During Instability in Coronary Artery Disease study, 238-239, 241-242
Fraxaparin Versus Unfractionated Heparin in Acute Coronary Syndromes, 240
Free radicals
in brain edema pathophysiology, 210
in ischemic stroke pathophysiology, 197
Frequency encoding, in magnetic resonance imaging, 152-153
Fresh frozen plasma, in cerebral hemorrhage, in thrombolytic therapy, 231

Gamma-aminobutyric acid receptors, in ischemic stroke pathophysiology, 191
Gangrene, in heparin-induced thrombocytopenia, 248-249, 251-253
Gender
antiarrhythmic drug initiation and, 77-78

Gender (*continued*)
hypertension-obesity associations and, 42-43
myocardial infarction risk stratification and, 275
Gene (s)
immediate early, in ischemic stroke pathophysiology, 195-196
stress, in ischemic stroke pathophysiology, 195-196
Global Utilization of Streptokinase and tPA for Occluded Arteries (GUSTO) study, results of, 397-404, 410-411, 420-421, 440, 471
Glomerulosclerosis, in hypertension
dietary salt and, 26-27
obesity and, 48
Glucose
depletion of, brain edema in, 209-210
metabolism of
intracellular divalent ion status and, 3-6, 13-15
obesity hypertension and, 43-44, 47
Glutamate
excess of, in ischemic stroke, 186, 189-192
receptors for, in ischemic stroke pathophysiology, 189-191
Glycoprotein IIb/IIIa inhibitors, in unstable angina, 241
Gradient-echo imaging, of coronary arteries, 160-163
Grafts, occlusion of, thrombolytic therapy for, cerebral hemorrhage in, 229-230
Growth factors, in ischemic stroke pathophysiology, 197-198
Gruppo Italiano per lo Studio della Streptochinasi nell-Infarcto Miocardico (GISSI) study, results of, 398, 414-415, 420, 449

Heart failure, QT dispersion in, mortality and, 372-373
Heart rate
adaptation of, to QT interval, in coronary artery disease, mortality and, 360-361, 373-376
antiarrhythmic drug initiation effects on, 78-79
correction for, in QT dispersion measurement, 319-320, 333
variability of
in myocardial infarction risk stratification, 289-290
in reperfusion evaluation, 448-449
Heat shock proteins, in ischemic stroke pathophysiology, 195
Hemoconcentration, in sodium restriction, 35
Hemodynamics, of obesity hypertension, 48-49
Hemorrhage
adrenal, in heparin-induced thrombocytopenia, 248
brain, in thrombolytic therapy. *See* Thrombolytic therapy, cerebral hemorrhage in
heparin-induced, 237
Heparin, 235-246
low-molecular-weight
advantages of, 236-237, 242-243
Heparin (*continued*)
after angioplasty, 242
anticoagulant effects of, 237-238
disadvantages of, 242-243
in heparin-induced thrombocytopenia, 252
in myocardial infarction, 238-242
size of, 237
structure of, 237
unresolved issues concerning, 242-243
in unstable angina, 238-241
in peripheral vascular disease, 229
in pulmonary embolism, 229
in stroke, 180
cerebral hemorrhage in, 226
thrombocytopenia and thrombosis due to, 247-260
antiphospholipid antibody syndrome and, 252
cardiac catheterization in, 253-254
clinical classification of, 247-248
coronary angioplasty in, 253-254
coronary artery bypass surgery in, 254-255
diagnosis of, 249-250
incidence of, 247
pathophysiology of, 248
prevention of, 255
treatment of, 250-252
venous limb gangrene and, 252-253
unfractionated
limitations of, 235-237
in myocardial infarction, 238-241
Heparin induced platelet aggregation test, 250
Herniation, brain, in edema, 211
Hibernating myocardium
pathophysiology of, 457-460
reperfusion effects on, 445
Hirudin
in heparin-induced thrombocytopenia, 251, 253, 254-255
in unstable angina, 241
Holter monitoring
in antiarrhythmic drug initiation, 82
of QT interval, in coronary artery disease, mortality and, 368-369
for ventricular arrhythmia risk, in myocardial infarction, 287-288
Hydrochlorothiazide, in hypertension, in obesity, 52
Hydrogen peroxide, in ischemic stroke pathophysiology, 197
Hydroxyl radical, in ischemic stroke pathophysiology, 197
Hyperglycemia, brain edema in, 211
Hyperinsulinemia
intracellular divalent ion status in, 5-6
obesity hypertension and, 43-44, 47
Hyperlipidemia, QT dispersion in, mortality and, 370
Hypertension (systemic)
cellular ionic basis of, 1-22

Hypertension (systemic) (*continued*)
calcium in, 2-6
dietary effects on, 10-13, 16-17
extracellular regulation of, 10
glucose metabolism and, 13-15
lipid metabolism and, 16
magnesium in, 2-6
model for, 16-17
regulation of, 6-16
renin system and, 9-10
dietary salt effects on. *See* Salt, dietary, in hypertension
heterogeneity of, 1-2
left ventricular hypertrophy in, QT dispersion in, mortality and, 369-370
obesity and. *See* Obesity, hypertension and
prevention of, weight loss in, 50-51
reduction of, model for, 16-17
salt-sensitive
controversy over, 24-25
interventional studies on, 28-33
mechanisms of, 10-13
observational studies on, 27-28
prevalence of, 24-25
recommendations concerning, 35
sodium restriction risks in, 33-35
target organ damage in, 25-27
as sign of underlying process, 1
Hypertrophic cardiomyopathy, antiarrhythmic drugs in, efficacy of, 389
Hypokalemia, in antiarrhythmic drug initiation, 79
Hypomagnesemia, in antiarrhythmic drug initiation, 79
Hyponatremia, brain edema in, 210-211
Hypotension, in myocardial infarction risk assessment, 278, 282-283

Ibutilide, in atrial fibrillation, 80
Imaging. *See also specific techniques*
of brain edema, 213
of stroke, for thrombolytic therapy, 179
Immediate early genes, in ischemic stroke pathophysiology, 195-196
Immune complexes, in heparin-induced thrombocytopenia, 248
Immunoglobulin (s), heparin-dependent, 248
Immunoturbidimetric assay, for D-dimer, in pulmonary embolism, 262, 264
Inflammation, in myocardial infarct healing, reperfusion effects on, 427-428
Insulin
decreased, in weight loss, 49
in divalent ion regulation, 14-15
in obesity hypertension, 43-44, 47
vasodilation due to, 45
Interleukin (s), in ischemic stroke pathophysiology, 196
International Study of Infarct Survival (ISIS) trial, reperfusion studies of, 400, 421, 440
INTERSALT Study, of salt in hypertension, 27
Interuniversity Cardiology Institute Trial, of reperfusion, 441
Intracellular adhesion molecules, in ischemic stroke pathophysiology, 196-197
Intracranial pressure, increase of, in brain edema, 211
Intravascular ultrasonography, vs. coronary angiography, 91-138
accuracy of, 94
in balloon angioplasty, 97-101
in calcification assessment, 94-97
in directional atherectomy, 101-103
in dissection after angioplasty, 99
in eccentric lesions, 94
errors in, 94
in lesion evaluation, 91-97
limitations of, 127
in short stenosis, 93
in stenting, 103-127
of bifurcation lesions, 110-113
of bypass grafts, 114-115
in complex situations, 108-115
debulking before, 115-118
directional atherectomy with, 116-117
late outcome of, 106-108
of left main artery, 112
of ostial lesions, 108-110
provisional, 118-120
of restenosis, 123-127
rotational atherectomy with, 117-118
of small vessels, 115
spot, 120-123
in subacute thrombosis, 103-104
tissue prolapse through, 108
undeployed, 108
without coumadin, 105-106
in tissue characterization, 94-96
tomographic imaging in, 92-93
in vessel overlap, 93
Ionic hypothesis, of hypertension. *See* Hypertension (systemic), cellular ionic basis of
Ischemia, myocardial. *See* Myocardial infarction; Myocardial ischemia
Ischemic stroke
edema in. *See* Brain edema
pathophysiology of, 185-207
animal models of, 185-186
cell death mechanisms in, 186-187
cell surface signalling in, 187-189
excitotoxicity theory of, 186
focal ischemia models of, 185-186
global ischemia models of, 185-186

Ischemic stroke (*continued*)
intercellular signalling in, 196-198
intracellular signalling in, 192-196
ischemic preconditioning and, 196
ligand-gated receptors/channels in, 189-192
stages of, 187-188
reperfusion in, calcium flux in, 193
thrombolytic therapy for. *See* Thrombolytic therapy; Thrombolytic therapy, for stroke
Ischemic Syndrome Management trial, heparin in, 241
Isoproterenol, QT interval dispersion due to, in long QT syndrome, 387

Jun NH2-terminal kinase, in ischemic stroke pathophysiology, 195

Kainate receptors, in ischemic stroke pathophysiology, 190
KCNQ proteins, defects of, in long QT syndrome, 346
Kidney dysfunction, in hypertension
dietary salt and, 26-27
obesity, 47-48
Kinases, in ischemic stroke pathophysiology, 194-195

Lamifiban, in myocardial infarction, 241
Lamotrigine, in ischemic stroke, 188
Laplace's law, in infarct expansion, 422
Larmor equation, in magnetic resonance imaging, 149-150
Late Assessment of Thrombolytic Efficacy (LATE), reperfusion results of, 400-401, 421, 433-434, 440
Latex agglutination assay, for D-dimer, in pulmonary embolism, 264
Leptin, in obesity hypertension, 45-46
Liatest assay, for D-dimer, in pulmonary embolism, 262-264
Life years gained, in economic evaluation, 168-169
Lipids, metabolism of, hypertension and, 16
Lipoproteins, metabolism of, hypertension and, 16
Lisinopril, in hypertension, in obesity, 52
Long QT syndrome, 345-350
antiarrhythmic drugs in, efficacy of, 386-387
description of, 345
genetic factors in, 345
registry for, 345
repolarization pattern in, 345-349
clinical evidence for, 347-349
experimental evidence for, 345-347

Magnesium
in blood pressure regulation, 2-6
in calcium regulation, 3
dietary salt effects on, 10
in proarrhythmia prevention, 393
regulation of
glucose in, 13-14
insulin in, 14-15
lipids in, 16
mechanisms of, 7-8
Magnetic resonance imaging
of brain edema, 213
of cerebral hemorrhage, in thrombolytic therapy, 230
of coronary arteries, 157-166
black blood (spin-echo), 159
with breath hold, 163
bright blood (gradient-echo), 160-163
challenges of, 157-159
clinical results of, 164-165
echo-planar, 162-163
respiratory gating with, 161-162
principles of, 149-156
contrast, 155
echo signal, 153-155
excitation, 150
resolution, 155
return to equilibrium, 150-151
signal source, 149-150
spatial encoding, 151-153
of pulmonary embolism, 268-270
Mannitol, in brain edema, 214
Mapping, body surface. *See* Body surface potential mapping
Mesh, polypropylene, in ventricular reinforcement, in infarct expansion, 423
Metabolism
intracellular divalent ions in, 2-6
in myocardial ischemia, 458-460
Metabotropic glutamate receptors, in ischemic stroke pathophysiology, 191
Metalloproteinases, activity of, in myocardial infarction, 424-426
N-Methyl-D-aspartate receptors, in ischemic stroke pathophysiology, 188-190, 193
Methylprednisolone, in myocardial infarction, infarct remodeling in, 427-428
Metoprolol, in hypertension, in obesity, 52
Mexiletine, QT interval dispersion due to, in long QT syndrome, 386-387
Mitochondria, calcium dynamics in, in ischemic stroke, 194
Mitogen-activated protein kinase, in ischemic stroke pathophysiology, 195
Mitral regurgitation, in myocardial infarction risk stratification, 275-276
Modeling, in economic evaluation, 170-171
Monocyte chemoattractant protein, in ischemic stroke pathophysiology, 196-197
Monophasic action potentials
in long QT syndrome, 347
in QT dispersion, 326-327

Monophasic action potentials (*continued*)
early afterdepolarizations and, 316-317
vs. electrocardiography, 317-318
T-wave genesis and, 313-314
upright T wave and, 314-315
Mortality
in coronary artery disease, QT interval and, 359-384
in hypertension, in sodium-restricted diet, 34
after myocardial infarction, reperfusion effects on, 440
vs. patency maintenance, 407-411
in myocardial infarction, reperfusion effects on, timing of, 397-404
in ventricular remodeling, after myocardial infarction, 473-474
Multicenter Acute Stroke Trials, of thrombolytic therapy, 178
Myocardial infarction
antiarrhythmic drugs in, QT interval dispersion due to, 389
in hypertension, in sodium-restricted diet, 33-34
infarct expansion after, late reperfusion effects on, 421-424
infarct healing promotion in, reperfusion in, 443-445
location of, in risk stratification, 276
low-molecular-weight heparin in
non-Q-wave, 238-241
ST-segment elevation, 241-242
QT dispersion in, 351-354
mortality and, 370-372
reperfusion therapy and, 352-353, 448
with ventricular arrhythmias, 353-354
QT interval prolongation in, 363-369
QT interval rate adaptation in, mortality and, 375-376
reperfusion after. *See* Reperfusion, after myocardial infarction
risk stratification after, 273-309
admission evaluation in, 274-278
autonomic nervous system assessment in, 289-291
baroreflex sensitivity tests in, 292
classification of, 273
coronary angiography in, 279-280
demographic factors in, 274-276
electrocardiography in, 280-286
ambulatory, 287-288
exercise, 281-284
heart rate in, 289-290
initial, 276-277
in ischemia assessment, 280-281
QT interval analysis in, 290-291
signal-averaged, 288-289
in ventricular arrhythmia risk assessment, 287-291
electrophysiologic studies in, 291-292
Myocardial infarction (*continued*)
exercise testing in, 281-286
goal of, 273
heart rate variability assessment in, 291-292
laboratory assays in, 277-278
left ventricular functional assessment in, 278
myocardial ischemia assessment in, 278-287
nuclear imaging in, 284-286
pharmacologic stress scintigraphy in, 284-285
stress echocardiography in, 286-287
ventricular arrhythmia risk assessment in, 287-292
ventriculography in, 285-286
thrombolytic therapy for. *See* Reperfusion, after myocardial infarction; Thrombolytic therapy, for myocardial infarction
ventricular remodeling after. *See* Ventricle (s), left, remodeling of
Myocardial Infarction Triage and Treatment prehospital trial, results of, 399
Myocardial ischemia. *See also* Myocardial infarction
assessment of, 278-287
coronary angiography in, 279-280
electrocardiography in. *See* Myocardial infarction, risk stratification of
exercise scintigraphy in, 284-286
exercise testing in, 281-284
importance of, 278-279
nuclear imaging in, 284-286
pharmacologic stress scintigraphy in, 284-285
stress echocardiography in, 286-287
ventriculography in, 285-286
global function during, 455-457
QT dispersion in, 351-358
myocardial infarction, 351-354
stable coronary disease, 354-355
unstable angina, 354
vasospastic angina, 355-356
QT interval rate adaptation in, mortality and, 375, 376
regional function during, 455-457
residual, prognosis of, 464-466
Myocardium
hibernating
pathophysiology of, 457-460
reperfusion effects on, 445
stiffness of, reperfusion effects on, 428-429
stunned, reperfusion effects on, 457-458
viability of, after myocardial infarction, reperfusion and, 455-470

Nadroparin, in myocardial infarction, 238, 240
National Health and Nutrition Surveys, on obesity, 39-41
National Institute of Neurological Disorders and Stroke, thrombolytic therapy trials of, 177-179

Navigator technique, in magnetic resonance imaging, of coronary arteries, 162
Necrosis
  myocardial, reperfusion effects on, 429-430, 457-458
  neurons, in ischemic stroke, 186-187
  skin
    in heparin-induced thrombocytopenia, 248-249
    warfarin-induced, 253
Neurons
  calcium homeostasis in, 192-193
  death of, ischemic. *See* Ischemic stroke, pathophysiology of
Nicorandil, QT interval dispersion due to, in long QT syndrome, 387
Nifedipine, in hypertension, in obesity, 53
Nimodipine, in ischemic stroke, 189
Nitric oxide
  in brain edema pathophysiology, 210
  in ischemic stroke pathophysiology, 197
NMDA receptors, in ischemic stroke pathophysiology, 189-190
Norepinephrine
  decreased, in weight loss, 49
  excess of, in sodium restriction, 35
  in obesity hypertension, 44-45, 47
Nuclear imaging, in myocardial infarction risk assessment, 284-286
Nucleus, calcium dynamics in, in ischemic stroke, 193-194

Obesity
  hypertension and, 39-58
    age effects in, 42
    concept of obesity, 39-41
    epidemiologic studies of, 41-43
    gender effects in, 42-43
    hemodynamics of, 48-49
    insulin in, 43-44, 47
    intracellular divalent ion status in, 3-6
    leptin in, 45-46
    mechanisms of, 43-49
    racial effects in, 42
    renal function in, 47-48
    sodium in, 46-47
    sympathetic nervous system in, 44-45, 47
    treatment of, 49-54
  measurement of, 39-40
Open infarct-related artery hypothesis. *See* Patent infarct-related artery hypothesis
Optimal Atherectomy Restenosis Study, 103
Osmotherapy, for brain edema, 214
Osteoporosis, heparin-induced, 237
Ostial lesions, stenting of, imaging with, 108-110
Oxygen, loss of, brain edema in, 209-210
Oxygen free radicals
  in brain edema pathophysiology, 210
  in ischemic stroke pathophysiology, 197

Parasympathetic nervous system, function of, after myocardial infarction, reperfusion effects on, 434-435
Parathyroid hypertensive factor, 12-13
Patent infarct-related artery hypothesis
  clinical aspects of, 405-418
  electrical stability and, 439-454
  left ventricular modeling and, 471-483
  mechanisms of action in, 419-438
  myocardial viability and, 455-470
  overview of, 387-404
Peripheral vascular disease, thrombolytic therapy for, cerebral hemorrhage in, 229-230
Peroxynitrite anion, in ischemic stroke pathophysiology, 197
Phase encoding, in magnetic resonance imaging, 152-153
N^6-R-Phenylisopropyl adenosine, in ischemic stroke, 192
Phosphocreatine, depletion of, in ischemic stroke, 186
Phospholipid-dependent kinase C, in ischemic stroke pathophysiology, 194
Plaques, coronary artery, intravascular ultrasonography of. *See* Intravascular ultrasonography
Plasma exchange, for heparin-induced thrombocytopenia, 251
Plasminogen activator. *See* Tissue-type plasminogen activator
Platelet (s), heparin effects on. *See* Heparin, thrombocytopenia and thrombosis due to
Platelet aggregation test, in heparin-induced thrombocytopenia, 250
Platelet IIb/IIIa Antagonism for the Reduction of Acute Coronary Syndrome Events in a Global Organization Network trial, 241
Polypropylene mesh, in ventricular reinforcement, in infarct expansion, 423
Positron emission tomography
  in coronary artery disease, QT dispersion and, 355
  in myocardial infarction risk assessment, 285
  in myocardial viability assessment, 460-461
Potassium channel openers, QT interval dispersion due to, in long QT syndrome, 387
Potassium channels, activation of, in ischemic stroke, 188
Prazosin, in hypertension, in obesity, 53
Predictors and Outcomes of Stent Thrombosis registry, 104
Principal component analysis, in long QT syndrome, 348-349
Proarrhythmias
  in antiarrhythmic drug initiation, 75-76

Proarrhythmias (*continued*)
detection of, 81-84
dose dependence of, 80
drug interactions and, 80-81
incidence of, 76
predisposing factors in, 77-81
recurrent, 79-80
types of, 75-76
ventricular, antiarrhythmic drugs in, QT interval dispersion due to, 389-393
Propafenone, in atrial fibrillation, initiation of, 80, 85
Propentofylline, in ischemic stroke, 192
Proteases
in brain edema pathophysiology, 210
in ischemic stroke pathophysiology, 195
Protein kinases, in ischemic stroke pathophysiology, 194-195
Proteinuria, in hypertension
dietary salt and, 26-27
obesity and, 48
Prourokinase, 220
Pseudo--in-stent restenosis, of coronary arteries, 123, 125-126
PTCA. *See* Coronary angioplasty
Pulmonary embolism
clinical features of, 261
detection of, 261-272
computed tomography in, 265-268
D-dimer assay in, 262-264
magnetic resonance imaging in, 268-270
ventilation-perfusion scan in, 261-262, 267, 269
epidemiology of, 261
in heparin-induced thrombocytopenia, 248-249
thrombolytic therapy for, cerebral hemorrhage in, 229
Pulmonic stenosis, balloon dilatation of, long-term results of, 59-63
Pulse pressure, in myocardial infarction risk stratification, 275
Pursuit Glycoprotein IIb/IIIa in Unstable Angina: Receptor Suppression Using Integrelin Therapy trial, 241

Q wave, onset of, QT dispersion measurement at, 330-331
QRS complex, signal averaging of, in arrhythmias, reperfusion effects on, 432-433
QT dispersion
antiarrhythmic drug effects on, 385-396
body surface potential mapping in, 312-313
in coronary artery disease, mortality and, 360, 369-373
coronary ischemia effects on, 351-358
definition of, 329, 360
early afterdepolarization in, 316-317
electrophysiology of, 311-324
QT dispersion (*continued*)
vs. electrocardiography, 317-318
mechanistic basis of, 318
rate dependence in, 319-320
T-peak-to-T-end hypothesis, 318
transmural dispersion of repolarization in, 318
T-wave loop variables in, 318-319
interpretation of, 325-344
in long QT syndrome, 345-350, 386-387
measurement of, 325-344, 385-386. *See also methods, e.g.,* Electrocardiography; Monophasic action potentials
automatic vs. manual, 333-338
future of, 338-339
heart rate and, 333
lead systems for, 331-333
principles of, 329-333
at Q wave onset, 330-331
QT dispersion concept development, 326-329
reliability of, 333-338
after reperfusion, 448
simultaneous recording in, 331
U wave inclusion in, 330
modulators of, 392-393
in myocardial infarction risk stratification, 290-291
transmural, 318
T-wave genesis in, 313-314
upright T wave in, 314-315
versus ventricular depolarization, 315-316
QT interval
abnormalities of, in normal subjects, subsequent mortality in, 361-362
baseline, antiarrhythmic drug initiation and, 78
circadian variation of, in myocardial infarction risk stratification, 290-291
concept of, development of, 326-329
in coronary artery disease, mortality and, 359-384
dispersion of. *See* QT dispersion
prolongation of, coronary artery disease mortality and, 359-369
rate dependent abnormalities of, in coronary artery disease, mortality and, 360-361, 373-376
Quality adjusted life years gained, in economic evaluation, 168-169
Quetelet's index (body mass index), in obesity, 39-40
Quinidine
in atrial fibrillation, proarrhythmic effects of, 80-81
QT interval dispersion due to, in coronary artery disease, 388
Quinoxalinediones, in ischemic stroke, 190

Racial factors, in hypertension-obesity associations, 42
Radionuclide studies, in myocardial infarction risk assessment, 284-286
Recombinant Pro-Urokinase Against Streptokinase in Acute Myocardial infarction trial, results of, 407

Relaxation, in magnetic resonance imaging, 150-151
Renin, decreased, in weight loss, 49
Renin system, in hypertension
  calcium and, 9-10
  dietary salt and, 26, 34-35
Reperfusion
  of brain
    calcium flux in, 193
    edema in, 211-214
    therapeutic window for, 220
  after myocardial infarction
    arrhythmia protection in, 431-434, 439-454
      autonomic function tests in, 448-449
      autonomic stabilization in, 445
      electrophysiologic studies of, 449-450
      evidence against, 450
      evidence for, 440-443
      hibernating myocardial rescue in, 445
      infarct healing in, 443-445
      markers for, 445-450
      mechanism of, 443-445
      QT dispersion in, 352-353, 448
      in revascularization, 442-443
      signal-averaged electrocardiography in, 446-448
      survival in, 440
      in thrombolytic therapy, 440-442
      ventricular remodeling prevention in, 443-445
    clinical events in, 405-418
      late reperfusion benefits, 411-415
      mechanisms of, 405-406
      reocclusion, 399, 407, 411
      survival, 407-411
      temporal changes, 406-407
    decision making about, 466
    early
      arrhythmia protection in, 440
      benefits of, 398-400
    in hibernating myocardium rescue, 445
    late
      arrhythmia protection in, 440
      arrhythmias in, 431-434
      autonomic function and, 434-435
      benefits of, 400-403, 411-415, 474-479
      collagen breakdown in, 424-426
      extracellular matrix remodeling in, 424-427
      global ventricular dilatation in, 430-431
      infarct expansion in, 421-424
      inflammation in, 427-428
      mechanical effects in, 428-430
      mechanisms of, 402, 419-438
      scar formation in, 426-427
    late patency of, 401
    mechanisms of, 402, 405-406, 419-438
    mortality in, 407-411, 440
    myocardial viability in, 455-470
      assessment of, 460-464
Reperfusion (*continued*)
      blood flow and, 458-460
      clinical decision making in, 466
      global function in, 455-457
      metabolism and, 458-461
      necrosis transmurality and, 457-458
      prediction of, 461
      prognosis and, 464-466
      regional function in, 455-457
      residual ischemia in, 464-466
      residual stenosis and, 458
      ventricular remodeling and, 464-466
    overview of, 397-404
    reocclusion after, 399, 407, 411
    temporal changes in, 406-407
    timing of, 397-404
    ventricular remodeling effects of, 471-483
      in early reperfusion, 471
      evidence for, 478-479
      in late reperfusion, 474-477
      mechanisms in, 477-478
      in percutaneous angioplasty, 480-481
      remodeling process and, 472-473
      survival and, 473-474
Repolarization, spatial dispersion of. *See* QT dispersion
Resolution, in magnetic resonance imaging, 155
Respiratory gating, in magnetic resonance imaging, of coronary arteries, 161-162
Restenosis, of coronary arteries. *See* Coronary artery (ies), restenosis of
Riluzole, in ischemic stroke, 188
Risk stratification, after myocardial infarction. *See* Myocardial infarction, risk stratification after
Rotational atherectomy, stenting with, 117-118

Salt, dietary, in hypertension, 23-38
  calcium and, 10-12
  controversy over, 24-25
  historical studies on, 23-24
  interventional studies on, 28-33
  in obesity, 46-47
  observational studies on, 27-28
  recommendations concerning, 35
  restriction of, risks of, 33-35
  target organ damage and, 25-27
Saphenous vein graft, stenosis of, stenting of, 114-116
SAPK/ERK kinase, in ischemic stroke pathophysiology, 195
Scar formation, in myocardial infarction, reperfusion effects on, 426-427
Scintigraphy, in myocardial infarction risk assessment, 284-286
Scottish Heart Health Study, of salt in hypertension, 27-28
Sensitivity, to salt. *See* Hypertension (systemic), salt-sensitive

Serotonin release assay, in heparin-induced thrombocytopenia, 250
SimpliRed assay, for D-dimer, in pulmonary embolism, 262-264
Skin necrosis
  in heparin-induced thrombocytopenia, 248-249
  warfarin-induced, 253
Smooth muscle tone, regulation of, intracellular divalent ions in, 2-6
SNX-111 (conotoxin), in ischemic stroke, 189
Sodium channels, activation of, in ischemic stroke, 188
Sodium-calcium exchanger, in ischemic stroke pathophysiology, 193
Sotalol
  in atrial fibrillation, initiation of, 80, 85
  QT interval dispersion due to, proarrhythmias and, 391-392
Spatial encoding, in magnetic resonance imaging, 151-153
Spin-echo imaging
  of coronary arteries, 160-163
  in magnetic resonance imaging, 153-155
Stenosis
  aortic, balloon dilatation of, long-term results of, 63-67
  of coronary arteries. *See* Coronary artery (ies), restenosis of; Coronary artery (ies), stenosis of
  pulmonic, balloon dilatation of, 59-63
Stenting, of coronary arteries, 414-415
  imaging of. *See* Intravascular ultrasonography
Stenting in Chronic Coronary Occlusion (SICCO) trial, results of, 414
Stiffness, myocardial, reperfusion effects on, 428-429
Strategy of Intracoronary Ultrasound Guided PTCA and Stenting trial, 120
Streptokinase, 219
  in deep venous thrombosis, 230
  in myocardial infarction, 242
    cerebral hemorrhage in, 227-228
    results of, 397-404, 407, 414-415, 420
  in pulmonary embolism, 229
  in stroke
    cerebral hemorrhage in, 225, 226
    trials of, 175, 178
Stress, response to, in obesity hypertension, 49
Stress echocardiography, in myocardial infarction risk assessment, 286-287
Stress genes, in ischemic stroke pathophysiology, 195-196
Stress testing. *See* Exercise testing
Stroke
  cell death in. *See* Ischemic stroke, pathophysiology of
  edema in. *See* Brain edema
  thrombolytic therapy for. *See* Thrombolytic therapy, for stroke
Structural heart disease
  antiarrhythmic drug initiation in, 78
  QT interval rate adaptation in, mortality and, 375
ST-segment
  assessment of, in myocardial infarction risk stratification, 277
  depression of, in exercise testing, in myocardial infarction risk assessment, 282
Stunned myocardium, reperfusion effects on, 457-458
Superoxide anion, in ischemic stroke pathophysiology, 197
Survival and Ventricular Enlargement (SAVE) investigation, of reperfusion, 401, 408-409, 479
Survival rates. *See* Mortality
Sympathetic nervous system
  function of, after myocardial infarction, reperfusion effects on, 434-435
  in obesity hypertension, 44-45, 47
Sympatholytic agents, in hypertension, in obesity, 53
Syndrome X, intracellular divalent ion status in, 5

T wave
  in long QT syndrome, 345
  in QT dispersion
    different projections of, 318
    genesis of, 313-314
    local repolarization differences in, 318
    morphology of, 328-329, 338-339
    novel loop variables of, 318-319
    upright, 314-315
    width of (peak-to-end), 318
Technetium-99m exercise testing, in myocardial infarction risk assessment, 284
Thallium-201 exercise testing, in myocardial infarction risk assessment, 284-285
Thrombocytopenia, heparin-induced. *See* Heparin, thrombocytopenia and thrombosis due to
Thrombolysis and Angioplasty in Myocardial Infarction (TAMI) study, results of, 401, 413, 444, 479
Thrombolysis in Myocardial infarction (TIMI) trial, results of, 405-406
Thrombolytic therapy
  agents for, 217-220
  cerebral hemorrhage in, 217-233
    imaging in, 230-231
    incidence of, 221-222
    in intra-arterial administration, 225-226
    in intravenous administration, 222-225
    management of, 231
    mechanism of action and, 217-220
    in myocardial infarction, 227-229
    parenchymal, 221
    in peripheral vascular disease, 229-230
    risk factors for, 226-227
    transformation type, 221-222
    types of, 220-222

Thrombolytic therapy (*continued*)
for deep venous thrombosis, cerebral hemorrhage in, 230
for heparin-induced thrombocytopenia, 251
mechanism of action of, 217-220
for myocardial infarction. *See also* Reperfusion, after myocardial infarction
in arrhythmia protection, 440-442
cerebral hemorrhage in, 227-228
in risk stratification, 275
signal-averaged electrocardiography after, 446-447
for pulmonary embolism
cerebral hemorrhage in, 229-230
for peripheral vascular disease, 229
for stroke, 175-183
agents for, 217-220
cerebral hemorrhage in, 217-227
costs of, 178-179
guidelines for, 180-181
historical perspective of, 175-178
imaging before, 179
mechanism of action of, 217-220
with no documented blockage, 179-180
protocol for, 180-181
reperfusion injury and, 214
therapeutic window for, 220
timing of, 180-181
trials of, 175-180
Thrombosis, heparin-induced. *See* Heparin, thrombocytopenia and thrombosis due to
Thrombosis in Myocardial Infarction study, heparin in, 240
Thrombus
formation of, 218
imaging of, 95-96
Ticlopidine, in heparin-induced thrombocytopenia, 254
Tirofiban, in unstable angina, 241
Tissue inhibitors of metalloproteinases, in myocardial infarction, 424-426
Tissue-type plasminogen activator, 219
in deep venous thrombosis, 230
in myocardial infarction, 227-229, 397-404, 420-421
in peripheral vascular disease, 229
in pulmonary embolism, 229
in stroke
cerebral hemorrhage in, 222-227
costs of, 178-179
dosage for, 176
historical perspective of, 175-178
reperfusion injury and, 214
trials of, 178-180
Tomographic imaging, of coronary arteries, 92-93
Torsade de pointes
in antiarrhythmic drug initiation
Torsade de pointes (*continued*)
detection of, 81-84
incidence of, 76
predisposing factors for, 77-81
QT interval dispersion in, 390-393
early afterdepolarizations in, 316-317
Total Occlusion Post-Myocardial Infarction Intervention Study (TOMIIS), 401, 413-414
Total Occlusion Study of Canada, reperfusion studies of, 480
Transforming growth factor-β, in ischemic stroke pathophysiology, 196
Trial of Antihypertensive Interventions and Management, 31
Trial of Nonpharmacologic Interventions in the Elderly, 32, 50
Trials of Hypertension Prevention, 30-32, 51
Troponin, in myocardial infarction risk stratification, 277
Tumor necrosis factor-α, in ischemic stroke pathophysiology, 196

U wave, in QT dispersion studies, 330
Ultrasonography, intravascular. *See* Intravascular ultrasonography
Urokinase, 220
in deep venous thrombosis, 230
in myocardial infarction, 407
in peripheral vascular disease, 229-230
in pulmonary embolism, 229
in stroke, 180
cerebral hemorrhage in, 226

Vagal reflexes, after myocardial infarction, reperfusion effects on, 435
Valvular heart disease
balloon dilatation in, long-term results of
aortic stenosis, 63-67
pulmonic stenosis, 59-63
in myocardial infarction risk stratification, 275-276
Vascular cell adhesion molecules, in ischemic stroke pathophysiology, 196-197
Vascular tone, regulation of, intracellular divalent ions in, 2-6
Vasopressin, excess of, brain edema in, 211
Vasospastic angina, QT dispersion in, 355-356
Venous thrombosis, heparin-induced, 248-249, 252-253
Ventilation-perfusion scan, in pulmonary embolism, 261-262, 267, 269
Ventricle(s)
depolarization of, vs. repolarization, 315-316
dilatation of, after myocardial infarction, reperfusion effects on, 430-431

Ventricle(s) (*continued*)
left
aneurysms of, after myocardial infarction, reperfusion effects on, 443-445
function of, after reperfusion, in myocardial infarction, 278, 406
hypertrophy of
in hypertension, dietary salt and, 25-26
QT dispersion in, mortality and, 369-370
remodeling of, after myocardial infarction
with patent arteries, 481
process of, 472-473
prognosis and, 464-466
reperfusion effects on, 443-445, 471-483
repolarization of, dispersion of. *See* QT dispersion
Ventricular arrhythmias
exercise-induced
in myocardial infarction risk assessment, 283
QT interval rate adaptation in, mortality and, 376
in myocardial infarction
QT dispersion and, 353-354
reperfusion effects on, 441-442
risk assessment for, 287-292
Ventricular fibrillation
in myocardial infarction, QT dispersion in, 352, 354
Ventricular fibrillation (*continued*)
after myocardial infarction, reperfusion effects on, 432
Ventricular proarrhythmias, antiarrhythmic drugs in, QT interval dispersion due to, 389-393
Ventricular tachycardia
in coronary artery disease, antiarrhythmic drugs in, efficacy of, 387-389
after myocardial infarction, reperfusion effects on, 431-434, 441-443
Ventriculography, in myocardial infarction risk assessment, 285-286
VIDAS test, for D-dimer, in pulmonary embolism, 262-264

Waist-hip ratio, in obesity, 40
Warfarin, skin necrosis due to, 253
Weight loss, in hypertension, 16-17, 30-32
in obesity, 49-51
preventive, 50-51
Western Washington Intravenous Streptokinase trial, results of, 399
White clot syndrome. *See* Heparin, thrombocytopenia and thrombosis due to